

What Is Claimed Is:

1. A device for initiating and implementing a sudden vehicle deceleration, especially for emergency braking situations,  
wherein the deceleration is initiated by the explosion of at least one propelling charge or explosive charge that acts on at least one component of the deceleration devices.
2. The device as recited in Claim 1,  
wherein the explosion of the propelling charge or explosive charge moves a piston that applies pressure to the brake fluid.
3. The device as recited in Claim 1,  
wherein an arrester is destroyed by the explosion, so that the stored energy of an energy-storing apparatus is released.
4. The device as recited in Claim 3,  
wherein the energy-storing apparatus is a brake fluid reservoir under high pressure which causes a pressure build-up in the brake system due to the destruction of the arrester.
5. The device as recited in Claim 3,  
wherein the energy-storing apparatus is a preloaded spring and/or a preloaded piston which, by tension release, brings about a pressure build-up in the brake system.
6. The device as recited in one of the preceding claims,  
wherein the arrester is a retaining bolt or a valve.
7. The device as recited in one of the preceding claims,  
wherein the at least one component of the deceleration

- devices on which the propelling charge or explosive charge acts is the master brake cylinder.
8. The device as recited in one of the preceding claims, wherein the at least one component of the deceleration devices on which the propelling charge or explosive charge acts is an additional brake cylinder.
  9. The device as recited in one of the preceding claims, wherein the at least one component of the deceleration devices on which the propelling charge or explosive charge acts is an arrester in the brake caliper which, in response to the explosion of the propelling charge or explosive charge, releases preloaded, additional brake pistons that act on the brake disks.
  10. The device as recited in one of the preceding claims, wherein the firing of the propelling charge or explosive charge is triggered by a surrounding-field sensor system when an unavoidable collision is detected based on the objects in the surroundings of the vehicle and their movement.
  11. The device as recited in Claim 10, wherein the sensor system has a radar sensor for adaptive distance and speed measurement or a video sensor or a laser sensor or an ultrasonic sensor or a combination thereof.
  12. The device as recited in one of the preceding claims, wherein after triggering the sudden vehicle deceleration, the pressure in the brake system is reducible by opening at least one valve of an antilock braking system.
  13. A device for initiating and implementing a sudden vehicle deceleration, especially for emergency braking situations,

wherein the deceleration is initiated by the explosion of at least one propelling charge or explosive charge that acts on at least one wheel bearing, and the desired decelerative action is obtained by the destruction of the wheel bearing.